

## **REMARKS**

This paper is in response to the Office Action dated June 2, 2006. Claims 14-31 are currently pending. Claims 14-24 and 26-30 have been rejected. Claims 25 and 31 have been objected to as being dependent upon a rejected base claim, but indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 32 has been added.

Claims 14-17 were rejected under 35 U.S.C. § 102 (b) as being clearly anticipated by Japanese Published Unexamined Patent Application No. 2002-285852, hereinafter ("the '852 application"). A translated copy of the '852 application is submitted herewith. Claims 18-24 and 26-30 were rejected under 35 U.S.C. § 103 (a) as being obvious in light of the '852 application and in further view of U.S. Patent No. 5, 083,744 to Reinicke et al., hereinafter ("Reinicke"). Applicant respectfully traverses these rejections.

Claims 14-17 were rejected under 35 U.S.C. § 102 (b) as being clearly anticipated by the '852 application. Claim 14 recites "a magnet and a metal latch element cooperating to apply a magnetic force for releaseably latching said damper in the open position when moved thereto and in the closed position when moved thereto, wherein said magnet and latch element are arranged to latch said damper each time said shaft rotates through an arc of approximately 90°." The specification of the present application states that the magnetic latching arrangement "includes a permanent magnet 100 mounted on the outside of the rotor 88 adjacent to one of the poles 96." (¶ 0054).

Further, the specification states that "[f]our metal studs 102 are secured to the housing 86 and are spaced 90° apart (sic) at locations where the magnet 100 aligns with one of the posts 102 whenever the windings 92 and 94 are aligned with the magnetic poles 96 and 98."

*Id.* Still further, the specification states that the “[a]lignment of the magnet 100 adjacent to one of the posts or studs 102 acts to releaseably latch the rotor 88 in place to latch the damper 80 in its open and closed position without the need for mechanical stops.” *Id.* Thus, the metal latch element or the metal studs 102 cooperate in releaseably latching the damper in the open and closed positions through an arc of approximately 90°, as claimed in claim 14.

As seen in FIGS. 1-3, the ‘852 application does not disclose the claimed limitation of a magnet and latch element that are “arranged to latch said damper each time said shaft rotates through an arc of approximately 90°.” Initially, and as discussed in greater detail below in connection with the §103 rejection, the translation of the ‘852 application makes it clear that the ‘852 application is for non-analogous art. The present invention has to do with an air terminal for supplying conditioned air to a space. In stark contrast, the ‘852 application is for a valve device for intake control in an internal combustion engine. It has nothing to do with controlling the supply of conditioned air to a space.

The ‘852 application discloses a valve device for controlling intake air for an internal combustion engine having a valve element 12 that is turned by a drive motor 14. The valve element 12 is connected to a shaft 11, which in turn, is connected to a partial gear 7. The partial gear 7 contains a permanent magnet 4 coupled thereto. In FIG. 2 the magnet 4 is shown in contact with a permanent magnet 5 that is positioned on the end of a positioning bolt 20. When the shaft 11 is turned by the motor 14, and the valve element 12 is moved from a first position in FIG. 2 to a second position in FIG. 3, the magnet 4 releases from contact with the permanent magnet 5 and comes into contact with a permanent magnet 6 that is positioned on the end of a positioning bolt 21. The shaft 11 moves from the position where magnet 4 is in contact with magnet 5 to the position where magnet 4 is in contact with magnet 6. As seen in the FIG. 2,

reproduced below, the arc through which the shaft rotates is not approximately  $90^\circ$ . Specifically, lines, indicated by reference numerals 100 and 102, have been drawn from the axis of the shaft to the points where the magnet 4 is in contact with permanent magnets 5, 6. The angle between line 100 and line 102 is represent by reference numeral 104 and is approximately  $110^\circ$ , as measured by a protractor. Another line 106 has been drawn at approximately  $90^\circ$  from line 100, as measured by a protractor. The angle between line 102 and line 106 is represent by reference numeral 108 is approximately  $20^\circ$ . Thus, as seen in FIG. 2, there is a substantial difference, approximately  $20^\circ$ , between the angle 104 between lines 100 and 102 and the angle between lines 100 and 106. As such, the arc through which the shaft rotates on the '852 application is not approximately  $90^\circ$ , rather the arc through which the shaft rotates is approximately  $110^\circ$ .



Next, claim 14 also requires a motor with a stator and a rotor. Claim 14 also requires that the rotor be “connected directly with the shaft to rotate the shaft when the rotor turns”. In contrast, the ‘852 application discloses a drive motor 14 having a rotary output shaft 14a. The motor 14 of the ‘852 application includes a rotor therein which is coupled directly with the output shaft 14a of the motor 14. The output shaft 14a, however, is not the shaft or valve axis 11 upon which the valving element 12 is positioned. In other words, Applicant’s claim 14 requires that the rotor of the motor be connected directly with the shaft on which the damper is carried. The rotor of the motor 14 of the ‘852 application is not connected on the shaft 11, but is instead connected directly on the output shaft 14a. In fact, the ‘852 application discloses a complicated mechanical gear mechanism 3 “to transmit [the motor’s] revolution to the valve axis 11”. (¶0056). The only thing carried on the motor output shaft 14a is a worm 15 for rotating a spur gear 8, which in turns rotates a partial gear 7 that is coupled with the shaft 11 for rotating the valve element 12. As the rotor of the motor 14 of the ‘852 application is not “connected directly” with the shaft on which the damper is carried, the ‘852 application does not disclose all of the limitations of Applicant’s claim 14. As such, the rejection of claim 14 under §102 based on the ‘852 application should be withdrawn. Applicant respectfully requests such action.

Applicant further submits that claims 15-25, which depend from independent claim 14, are also allowable, at a minimum, by virtue of their dependence from an allowable base claim. Such favorable action is respectfully requested. For example, Applicant’s claim 15 requires that the shaft on which the damper is carried be moved between the open position and the close position “without the need for mechanical stops.” In contrast, the ‘852 application clearly discloses a mechanical stop for the open position and a mechanical stop for the closed position in the way of positioning bolts 20, 21. These bolts with their magnets 5, 6 attached to

the end thereof are specifically designed to prevent further rotation of the partial gear 7 and, in turn, the shaft 11 by mechanically abutting or stopping the rotation of the shaft 11 by coming into contact with the permanent magnet 4 that is installed on the partial gear 7. As discussed in paragraphs 24 and 27 of the '852 application, the valve device is arranged such that the magnet 4 of the partial gear 7 comes into contact with either the magnet 5 or 6 to stop the shaft 11 so the valve is in its open position or its closed position. In other words, the positioning bolts 20, 21 act as mechanical stops for the shaft 11, in contrast to Applicant's claimed movement from the open position to the closed position "without the need for mechanical stop."

Claims 26-30 were rejected under 35 U.S.C. § 103 (a) as being obvious in light of the '852 application and in further view of Reinicke.

MPEP §2142 states that, "[t]he examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the examiner does not produce a prima facie case, the applicant is under no obligation to submit evidence of nonobviousness." §2142 goes on to state that:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some *suggestion or motivation*, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to *combine reference teachings*. Second, there must be a reasonable expectation of success. *Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.*

It has further been held that the determining of obviousness under 35 U.S.C. §103 will not include nonanalogous art. In re Pagliaro, 210 USPQ 888 (CCPA 1981). Two criteria have evolved for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the

particular problem with which the inventor is involved. In re Deminski, 230 USPQ 313 (Fed. Cir. 1986).

Thus, the determination that a reference is from a nonanalogous art is twofold. First, we decide if the reference is within the field of the inventor's endeavor. The valve device for intake control into a combustion engine of the '852 application is clearly not in the field of an air terminal for applying conditioned air to a space and therefore is clearly not in Applicant's field of endeavor.

Next, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved. In the present instance, Applicant was faced with the problem of controlling the delivery of conditioned air to a space. The '852 application, however, does not deal with or solve this problem. Instead, the '852 application deals with a valve for intake control in a combustion engine. The device in the '852 application is used to combat the opening or closing of a valve by wind pressure or vibration by abutting contact of the permanent magnets. Thus, the device in the '852 application is used to prevent the movement of a valve due to forces inside an engine while the device in the present invention is used to regulate the amount of conditioned air delivered to a space capable of human occupancy. One in the conditioned air delivery arts would not look to the combustion engine arts for suggestions for a device that controls the delivery and amount of conditioned air to a room. As such, the '852 application is non-analogous art and therefore can not be the basis of a proper §103 rejection.

In summary, Applicant submits that the rejection of claim 26 is improper as the '852 application is non-analogous. Claims 27-31, which depend from claim 26, are submitted to be allowable, at a minimum, by virtue of their dependence from an allowable base claim.

Accordingly, Applicant respectfully requests the rejections be withdrawn and claims 26-31 be indicated as allowable. Such favorable action is respectfully requested.

Additionally, Claim 26 is also allowable over the prior art of record. For example claim 26 includes the limitation of a “stator having a first pair of opposed windings maintained at a first polarity and a second pair of windings maintained at a second polarity, wherein the second polarity is different from the first polarity.” As stated by the Examiner, the ‘852 application does not disclose this type of motor. Thus, the ‘852 application does not disclose all the limitations of claim 26.

Reinicke also does not disclose this limitation. The Examiner states that Reinicke discloses opposed windings having the same polarity (in Col. 4, lines 20-49), the latching magnet 51 and the armature magnet 40. Applicant respectfully disagrees. Reinicke, as explained in Col. 4, lines 20-49, does not disclose first and second pairs of opposed windings where the first pair of opposed windings are at a first polarity and the second pair of opposed windings are at a second polarity.

In contrast, as shown in FIGS. 4 and 5, Reinicke discloses permanently magnetized elements 50, 51 that are united to the retaining ring 36, both of which have a S-pole and polarized magnet elements 40, 41, wherein magnet element 40 has a N-pole while magnet 41 has a S-pole. In other words, Reinicke discloses a single pair of windings, each having a S-pole and a N-pole. Reinicke does not disclose a stator having first **and** second pairs of windings. Further, still, Reinicke does not disclose a stator having a first pair of opposed windings maintained at a first polarity and a second pair of windings maintained at a second polarity, wherein the second polarity is different from the first polarity. Thus, Reinicke does not disclose all the limitations of claim 26.



Thus, none of the prior art of record either singly or in combination discloses all the limitations of claim 26. Applicant submits that claims 27-31, which depend from independent claim 26, are also allowable, at a minimum, by virtue of their dependence from an allowable base claim. Such favorable action is respectfully requested.

If the Examiner requires anything further in connection with this application, he is invited to contact the undersigned attorney at the number listed below. A Request for Continued Examination and an Extension of Time are submitted herewith.

The Commissioner is hereby authorized to charge any fees, or credit any overpayment, to Deposit Acct. No. 19-2112.

Respectfully submitted,

December 4, 2006

/Clinton G. Newton/  
Clinton G. Newton  
Reg. No. 42,930

SHOOK, HARDY & BACON L.L.P.  
2555 Grand Blvd.  
Kansas City, MO 64108-2613  
816/474-6550

CGN/dws